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EXAMINER	
PEREZ, ANGELICA	
ART UNIT	PAPER NUMBER
2618	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	09/887,778	PANASIK ET AL.	
	Examiner	Art Unit	
	Perez M. Angelica	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 12/13/2007 have been fully considered but they are not persuasive.

2. In the remarks, the applicant argues in substance:

(A) In pages 10-13, the applicant argues where “Chang fails to teach…monitoring the data signals received by the mobile station from the base station…received by the transceiver..."

In response to argument (A), the examiner would like to point out that given the broadness of the claim, it is open to various interpretations, including where it is not clear who is "monitoring", it can be the BS, another element in the system or the MS itself. The claims only explicitly recite the monitoring of signals (the signals being those received by a mobile from a base station). The claims though do not explicitly recite ***where*** this monitoring is occurring. Therefore, Chang reads on the limitation, see column 2, lines 41-51, e.g., "the observation that if the terminal is having difficulty receiving a signal from the base station because it is in a fade, the base station will perceive a similar difficulty..."

(B) In pages 10-13, the applicant argues, “disabling the ability of the mobile station to transmit data signals”

In response to argument (B), the examiner would like to explain that when the MS experiences serious fading, it is unable to send data message in the uplink direction and where the BS sends message to the BS trying to bring the MS user back into an

area outside the shade; thus, communication in both directions can proceed. The examiner was not able to find in the specification what the applicant considers, "serious fading"; therefore, given a broad, general interpretation, communication that reaches a threshold indicating bad quality can be considered serious fading because it is interfering with communication to the point of having to stop it. See Chang, column 6, lines 34-37, where a fade that puts the call in "danger of being dropped" can be considered serious. .

(C) In page 14, the applicant argues, "Chang fails to teach…"receiving a control signal from the base station that indicates the loss of primary base station rake fingers to provide a determination whether the mobile station is in a shadow of the base station…"

In response to argument (C), the examiner would like to explain where Chang is not explicit regarding this limitation; however, it is implied; e.g., CDMA receive multi-path measurements that are analyzed, e.g., "delayed and corrected in phase" so as to obtain channel information derived from multi-path; thus "rake finger". See columns 1-2, lines 62-67 and 1-3 and column 5, lines 2-7. The additional reference was introduced in order to better illustrate the teachings regarding this limitation, particularly, the mentioning of "rake finger".

(D) In pages 14-29, the applicant argues, "Rainish actually turns off its receiver, whereas the present invention turns off the transmitter…"

In response to argument (D), the examiner would like to explain where there exists several possibilities that can be done in order to save power, one would be to

partially turn off the receiver, another would be to turn off the transmitter, another would be a combination of both , another would be to turn off only one or several components of the mobile device, etc. therefore, it would be obvious to one of ordinary skill in the art that turning off a receiver or a transmitter are both well known power saving methods. Therefore, the use of rake fingers [or whatever else you used Rainish for] with the power saving concepts of Rainish could obviously be combined with the power saving concepts or Chang.

(E) In pages 14-29, the applicant argues, "Causing a transmitter to ramp up the power output until the mobile station transmitter output power level reaches a previous power level".

In response to argument (E), the examiner would like to explain where when the MS transmitter is turned on, the power inherently See Kido, column 3, lines 50-61, where the reception is intermittently operated meaning that the power is turned off/down for the receiver when it is in an out of coverage zone (in order to reduce power consumption), and it is turned on/up (ramped up) when the receiver returns/enters a coverage zone needs to be ramped up, and where ramping up the power can be done, in stages or all at once, in order to attain communication.

Claim Rejections. 35 USC § 112

3. Claim rejection under 35 U.S.C. 112 has been withdrawn.

Claim Rejections. 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action: A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-2, 10, 28-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Chang, Shih-Jeh (Chang, US Patent No.: 6188890B1).

Regarding claim 1, Chang teaches of a method of power management of data communication, a method of data communication between a base station and a mobile station over a wireless communication network (figure 3, item 303 corresponding to the MS and 304,305 corresponding to the wireless communication), the method comprising the steps of: transmitting a data signal between a mobile station and a base station (column 1, lines 39-44, where the components of cellular systems communicate data signals among them); monitoring the data signal received by the mobile station from the base station (column 2, lines 43-45); and disabling the ability of the mobile station to transmit data signals to, while maintaining the ability of the mobile station to receive data signals from (columns 6 and 10, lines 34-45 and 7-13, respectively), the base

station (column 7, lines 1-3; where the user is "distracted from the conversation" and not allowed to talk, therefore, no data signals are sent from the MS to the BS) when the mobile station is in a shadow of the base station (column 6, lines 35-37).

Regarding claim 2, Chang teaches all the limitations according to claim 1. In addition, Chang teaches where the step of monitoring the data signal received by the mobile station from the base station comprises monitoring the signal to noise ratio (SNR) of the data signal received by the mobile station from the base station to provide a determination whether the mobile station is in a shadow of the base station (column 2, lines 43-61 and column 4, lines 54-58).

Regarding claim 10, Chang teaches of a method of power management of data communication, a method of data communication between a base station and a mobile station over a wireless communication network (figure 3, item 303 corresponding to the MS and 304, 305 corresponding to the wireless communication), the method comprising the steps of: transmitting a data signal between a mobile station and a base station (column 1, lines 39-44, where the components of cellular systems communicate data signals among them); monitoring the signal to noise ratio (SNR) of the data signals received by the mobile station from the base station to provide a determination whether the mobile station is in a shadow of the base station (column 2, lines 43-61 and column 4, lines 54-58); and disabling transmission of data signals from (column 7, lines 1-3; where the user is "distracted from the conversation" and not allowed to talk, therefore, no data signals are sent from the MS to the BS) and maintaining reception of the data signals by the mobile station (columns 6 and 10, lines 34-45 and 7-13, respectively),

when the mobile station is in a shadow of the base station (columns 6, lines 35-37). Regarding claim 28, Chang teaches of a method of power management in a wireless communication transceiver comprising the steps of (figure 8, item 8): monitoring the data signal received by the transceiver (column 2, lines 43-45); and disabling the ability of the mobile station to transmit data signals to, while maintaining the ability of the mobile station to receive data signals from (columns 6 and 10, lines 34- 45 and 7-13, respectively), the base station (column 7, lines 1-3; where the user is "distracted from the conversation" and not allowed to talk, therefore, no data signals are sent from the MS to the BS) when the received signal quality falls bellow a pre\- determined threshold (column 6, lines 3-7).

Regarding claim 29, Chang teaches all the limitations according to claim 28. Chang further teaches where the received quality signal is defined by SNR (column 2, lines 43-61 and column 4, lines 54-58).

Regarding claim 30, Chang teaches all the limitations according to claim 28. Chang further teaches where the received signal quality is defined as a received signal level (column 5, lines 28-31).

Regarding claim 31, Chang teaches all the limitations according to claim 28. Chang further teaches where the wireless communication transceiver is a cellular handset transceiver (figure 8, item 804).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 3, 5-8, 11-14, 16-20 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang, Shih-Jeh (Chang, US Patent No.: 6188890B1) in view of Rainish et al. (Rainish, US 6606490B1) and further in view of Chen et al. (Chen, US007260401B2).

Regarding claim 16, Chang teaches of a method of power management of data communication, a method of data communication between a base station and a mobile station over a wireless communication network (figure 3, item 303 corresponding to the MS and 304, 305 corresponding to the wireless communication), the method comprising the steps of: transmitting a data signal between a mobile station and a base station (column 1, lines 39-44, where the components of cellular systems communicate data signals among them); monitoring the data signal received by the mobile station from the base station (column 2, lines 43-45); and disabling the ability of the mobile station to transmit data signals to, while maintaining the ability of the mobile station to receive data signals from (columns 6 and 10, lines 34-45 and 7-13, respectively), the base station (column 7, lines 1-3; where the user is "distracted from the conversation" and not allowed to talk, therefore, no data signals are sent from the MS to the BS) when the mobile station is in a shadow of the base station (column 6, lines 35-37).

Chang does not explicitly teach of transmitting a signal from the base station to the mobile station that indicates a loss of at least one primary base station rake finger to provide a determination whether the mobile station is in a shadow of the base station.

In related art regarding the method of battery operated radio receivers having power save reducing active reception time, Rainish teaches of transmitting a signal from the base station to the mobile station that indicates a loss of at least one primary base station rake finger to provide a determination whether the mobile station is in a shadow of the base station (column 1 and 2, lines 28-35 and 21-29, 42-52, respectively, lines 33-36; where it is well known in the art that the loss of a at least one primary base station rake finger is an indication of loss of signal or shadowing).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Chang's detection of shadowing with Rainish's detection through the loss of a finger in a rake antenna in order to accomplish detection through different methods.

Chan and Rainish do not specifically teach where the

Regarding claim 3, Chang teaches all the limitations according to claim 1. Rainish teaches where the step of monitoring the data signal received by the mobile station from the base station comprises receiving a control signal from the base station that indicates a loss of station rake fingers to provide a determination whether the mobile station is in a shadow of the base station (column 5, lines 23-25; where the rake receiver corresponds to the BS).

Regarding claims 5, 11 and 17, Chang teaches all the limitations according to claim 1. Rainish also teaches where the step of disabling transmission of the data signal by the mobile station when the mobile station is in a shadow of the base station comprises causing a transmitter associated with the mobile station to ramp down its power output until the mobile station transmitter enters an idle (off) state (column 4, lines 32-37 and 1-2; where a "sleep" mode corresponds to the "idle state").

Regarding claims 6, 12 and 18, Chang teaches all the limitations according to claim 1. Rainish teaches where the step of disabling transmission of the data signal by the mobile station when the mobile station is in a shadow of the base station comprises causing a transmitter associated with the mobile station to ramp down its power output to achieve a power condition associated with a previous period of time (column 4, lines 34-41; where the "waking up" corresponds to the previous power condition).

Regarding claims 7, 13 and 19, Chang teaches all the limitations according to claim 1. Rainish teaches the step of enabling transmission of the data signal by the mobile station when the mobile station is no longer in a shadow of the base station, subsequent to disabling transmission of the data signal at a previous power level by the mobile station (column 4, lines 32-41).

Regarding claims 8, 14 and 20, Chang teaches all the limitations according to claim 1. Rainish teaches where the step of enabling transmission of the data signal by the mobile station subsequent to disabling transmission of the data signal by the mobile station comprises causing a transmitter associated with the mobile station to ramp up its power output until the mobile station transmitter output power level reaches a previous

power level (column 4, lines 34-41; where the increase in power occurs during the "waking up" period).

8. Claims 4 and 22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang, Shih-Jeh (Chang, US Patent No.: 6188890B1) in view of Kido, Toru (Kido, US005977881A).

Regarding claim 22, Chang teaches of a method of power management of data communication, a method of data communication between a base station and a mobile station over a wireless communication network (figure 3, item 303 corresponding to the MS and 304, 305 corresponding to the wireless communication), the method comprising the steps of: transmitting a data signal between a mobile station and a base station (column 1, lines 39-44, where the components of cellular systems communicate data signals among them); monitoring the data signal received by the mobile station from the base station (column 2, lines 43-45); and disabling the ability of the mobile station to transmit data signals to, while maintaining the ability of the mobile station to receive data signals from (columns 6 and 10, lines 34-45 and 7-13, respectively), the base station (column 7, lines 1-3; where the user is "distracted from the conversation" and not allowed to talk, therefore, no data signals are sent from the MS to the BS) when the mobile station is in a shadow of the base station (column 6, lines 35-37).

Chang does not specifically teach of detecting an abrupt change in signal delay received by the mobile station from the base station to provide an indication of whether or not the mobile station is in a shadow of the base station. In related art regarding radio selective calling receiver having battery saving function, Kido teaches of detecting an

abrupt change in signal delay received by the mobile station from the base station to provide an indication of whether or not the mobile station is in a shadow of the base station (columns 3 and 4, lines 62-67 and 1- 10, respectively).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Chang's detection of shadowing with Kido's shadowing detection through abrupt as another method to detect shadowing.

Regarding claim 4, Chang teaches all the limitations according to claim 1. Kido teaches the steps of monitoring the delay of the data signal received by the mobile station from the base station; and identifying an abrupt change in the delay received by the mobile station from the base station to provide an indication of whether the mobile station is in a shadow of the base station (columns 3 and 4, lines 62-67 and 1-10, respectively).

9. Claim 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang, Shih-Jeh (Chang, US Patent No.: 6188890B1) in view of Kido and further in view of Rainish.

Regarding claim 23, Chang and Kido teach all the limitations according to claim 1. Rainish teaches where the step of disabling transmission of the data signal by the mobile station when the mobile station is in a shadow of the base station comprises causing a transmitter associated with the mobile station to ramp down its power output until the mobile station transmitter enters an idle (off) state (column 4, lines 32-37 and 1-2; where a "sleep" mode corresponds to the "idle state").

Regarding claim 24, Chang and Kido teach all the limitations according to claim 1. Rainish teaches where the step of disabling transmission of the data signal by the mobile station when the mobile station is in a shadow of the base station comprises causing a transmitter associated with the mobile station to ramp down its power output to achieve a power condition associated with a previous period of time (column 4, lines 34-41; where the "waking up" corresponds to the previous power condition).

Regarding claim 25, Chang and Kido teach all the limitations according to claim 1. Rainish further teaches the step of enabling transmission of the data signal by the mobile station when the mobile station is no longer in a shadow of the base station anal subsequent to disabling transmission of the data signal at a previous power level by the mobile station (column 4, lines 32-41).

Regarding claim 26, Chang and Kido teach all the limitations according to claim 1. Also, Rainish teaches where the step of enabling transmission of the data signal by the mobile station subsequent to disabling transmission of the data signal by the mobile station comprises causing a transmitter associated with the mobile station to ramp up its power output until the mobile station transmitter output power level reaches a previous power level (column 4, lines 34-41; where the increase in power occurs during the "waking up" period).

10. Claims 9, 15 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Bergins (Bergins et al., Patent No. 6,564,071 B1).

Regarding claims 9, 15 and 21, Chang teaches all the limitations according to claim 1.

Chang does not specifically teach where the step of enabling transmission of the data signal by the mobile station subsequent to disabling transmission of the data signal by the mobile station comprises causing a transmitter associated with the mobile station to ramp up its power output until the mobile station transmitter output power level reaches the maximum power level. In related art regarding transmission of data over a cellular telephone channel.

Bergins teaches where the step of enabling transmission of the data signal by the mobile station subsequent to disabling transmission of the data signal by the mobile station comprises causing a transmitter associated with the mobile station to ramp up its power output until the mobile station transmitter output power level reaches the maximum power level (column 3, lines 13-21 and figure 2, items 203, 204 and 205; where the threshold determines a minimum and minimum level).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Chang's enabling transmission with Bergins' power level determinant in order to restart connection after a maximum power level is reached.

11. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Kido and further in view of Bergins.

Regarding claim 27, Chang and Kido teach all the limitations according to claim 1.

Chang and Kido do not specifically teach where the step of enabling transmission of the data signal by the mobile station subsequent to disabling transmission of the data signal by the mobile station comprises causing a transmitter associated with the mobile

station to ramp up its power output until the mobile station transmitter output power level reaches the maximum power level.

In related art regarding transmission of data over a cellular telephone channel, Bergins teaches where the step of enabling transmission of the data signal by the mobile station subsequent to disabling transmission of the data signal by the mobile station comprises causing a transmitter associated with the mobile station to ramp up its power output until the mobile station/ transmitter output power level reaches the maximum power level (column 3, lines 13-21 and figure 2, items 203, 204 and 205; where the threshold determines a minimum and minimum level).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Chang's and Kido's enabling transmission with Bergins' power level determinant in order to restart connection after a maximum power level is reached.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angelica Perez whose telephone number is 571-272-7885. The examiner can normally be reached on 6:00 a.m. - 2:30 p.m., Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571) 272-4177. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and for After Final communications. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either the PAIR or Public PAIR. Status information for unpublished applications is available through the Private PAIR only.

For more information about the pair system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Information regarding Patent Application Information Retrieval (PAIR) system can be found at 866-217-9197 (toll-free). Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the TC 2600's customer service number is 703-306-0377.

/Perez M. Angelica/

Examiner, Art Unit 2618

/Matthew D. Anderson/

Supervisory Patent Examiner, Art Unit 2618

February 26, 2008